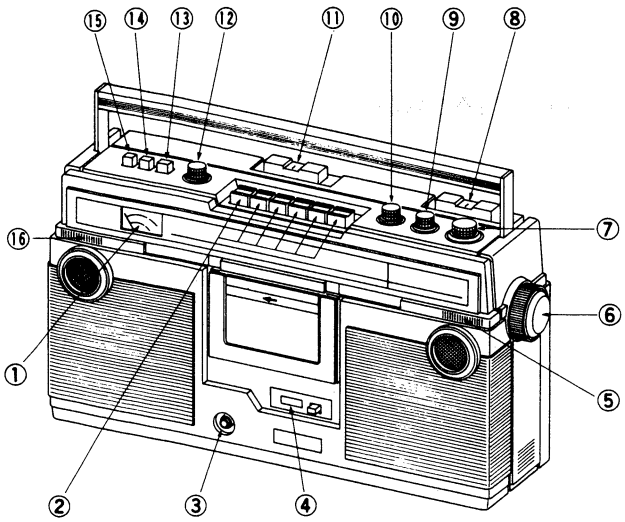
# HITACHI

# TRK-5280E

# SERVICE MANUAL

**No. 987**




## KEY TO ILLUSTRATIONS

① REC/TUN/BATT 3 WAY METER
② CASSETTE OPERATION BUTTONS
③ HEADPHONE JACK
④ TAPE COUNTER
⑤ BUILT-IN MICROPHONE (Right)
⑥ TUNING CONTROL
⑦ VOLUME CONTROL
⑧ BAND SELECTOR (FM/MW/LW)
⑨ TREBLE CONTROL
⑩ BASS CONTROL
⑪ FUNCTION SELECTOR (TAPE/RADIO/SLEEP)
⑫ BALANCE CONTROL
⑬ AFC SWITCH (ON/OFF)
⑭ MODE SWITCH (STEREO/MONO)
⑮ TAPE SWITCH (Nor/$CrO_2$)
⑯ BUILT-IN MICROPHONE (Left)

## SPECIFICATIONS

### GENERAL

| | |
|---|---|
| **Semi-conductors** | 6 IC's, 6 transistors, 20 diodes |
| **Power Supply** | AC: 220V, 50 Hz (E)<br>240V, 50 Hz (BS)<br>DC: 9V ("D" × 6) |
| **Power Consumption** | 10W |
| **Speaker** | 12 cm, 4Ω × 2<br>5 cm, 8Ω × 2 |
| **Power Output** | 1.8W (T.H.D. 10%) |
| **Dimensions** | 23.3 (H) × 42.2 (W) × 11.7 (D) cm |
| **Weight** | 4.7 kg (with batteries) |

### RADIO

| | |
|---|---|
| **Circuit System** | FM/MW/LW 3 band<br>Superheterodyne |
| **Tuning Range** | FM: 87.5 – 108 MHz<br>MW: 530 – 1605 kHz<br>LW: 150 – 350 kHz |
| **Intermediate Frequency** | FM: 10.7 MHz<br>MW/LW: 465 kHz |
| **Sensitivity** | FM: 12 dB<br>MW: 48 dB<br>LW: 53 dB |
| **Antenna** | FM: Telescopic antenna<br>MW/LW: Ferrite core antenna |
| **Accessary** | FM dipole antenna (BS) |

### TAPE RECORDER

| | |
|---|---|
| **Tape** | Cassette tape |
| **Tape Speed** | 4.75 cm/s |
| **Track System** | 4 track, 2 channel |
| **Recording System** | AC bias, 27/29 kHz |
| **Erasing System** | Quasi AC erase |
| **Frequency Range** | Normal: 50 – 10,000 Hz<br>$CrO_2$: 50 – 12,000 Hz |
| **S/N Ratio** | 45 dB |
| **Cross Talk** | 40 dB |
| **Input Sensitivity and Impedance** | Mic: −55 dBm, 600 ohms<br>DIN: 50k ohms |
| **Output level and Impedance** | DIN: 5k ohms<br>Speaker: 4 ohms |
| **Erase Ratio** | 60 dB |
| **Motor** | DC micromotor |
| **Fast Forwarding or Rewinding Time** | 120 sec. (Using C-60) |

# TAPE RECORDER WITH FM/MW/LW RADIO

July 1977

## SAFETY PRECAUTION

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makes. Critical parts are marked with ★ in the schematic diagram, and circuit board diagram.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

# EXPLANATION OF NEW CIRCUIT

## OUTPUT CIRCUIT

With the stereo set accomodated in one box, the stereophonic effect is inferior because of the small distance between the left and right speakers, and so the output circuit as shown in the figure below has been adopted in the TRK-5190E to obtain a more effective stereophonic sound.

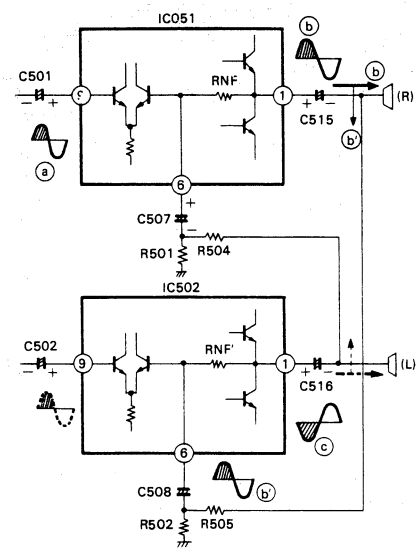
As shown in the diagram, when the positive half-cycle signal (a) is applied to the input pin (9) of IC501 (502), the positive half-cycle signal (b) with the same phase is taken to the output pin (1). When the positive half-cycle signal (b') is applied to the input pin (6), the negative half-cycle which is out of phase is outputed because a differential amplification circuit is used. This works as negative feedback, and the amount of feedback is determined by the ratio of R501 (502) and RNF (RNF').

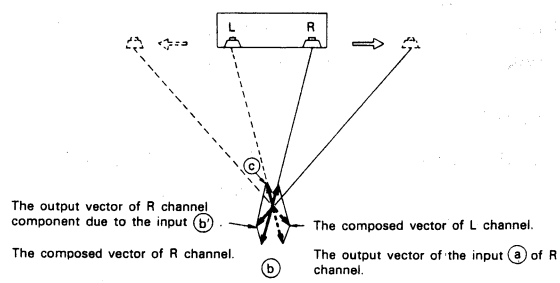
R504 (503) is the resistor for applying the output of the R channel to the input pin (6) of the L channel (IC502) and the output of the L channel to the input pin (6) of the R channel.

Considering just the R channel, the total of the in-phase components (b) of the input pin (9) and the negativephase-sequence component (c) is outputed to the output pin (1).

In the same way, the output of the L channel is the total of the in-phase components of the input and the negativephase-sequence output of the R channel.

The above is shown in the figure using vectors. Outputs are composed in the air and a directional feeling at the listening point becomes the same as that when the distance between the left and right speakers is made larger due to sum of vectors, and the stereo effect is increased.

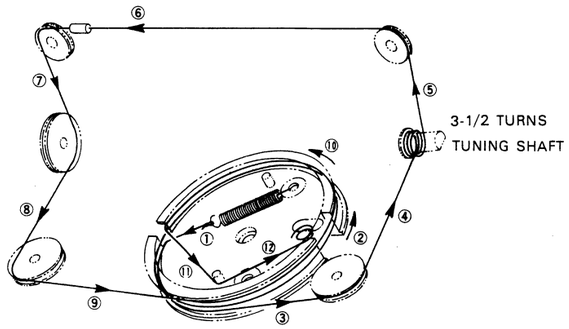




L
R
The output vector of R channel component due to the input (b')
The composed vector of R channel.
The composed vector of L channel.
The output vector of the input (a) of R channel.

## DIAL CORD STRINGING

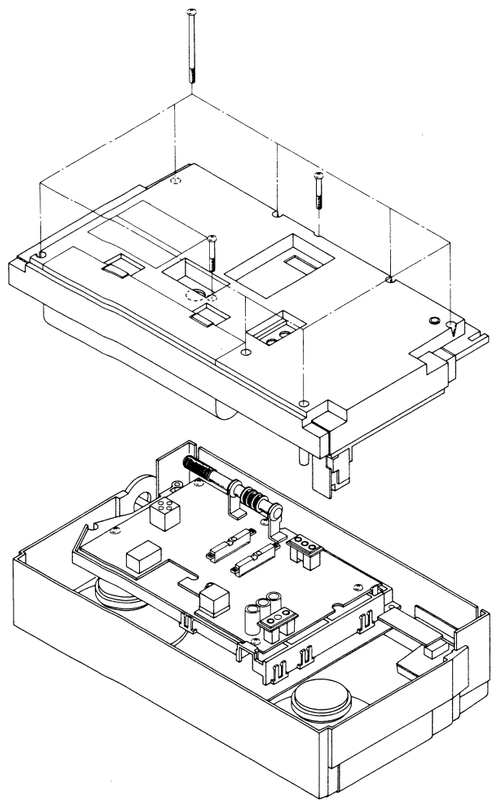
**METHOD**

1. Set pointer (TUNING SHAFT) to low frequency position.
2. Turn pulley fully counterclockwise.
3. String dial cord to direction of arrow (No. ① ~ ⑫).

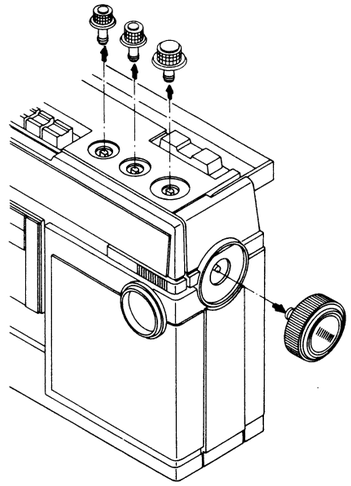


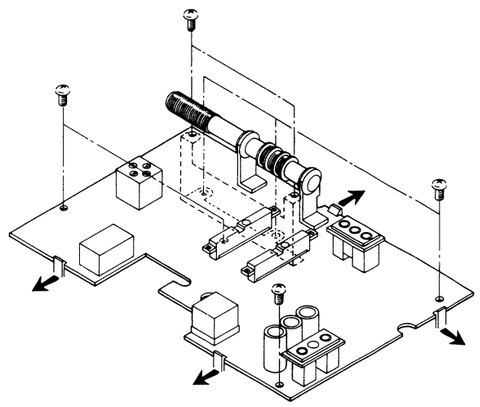

## DISASSEMBLY

1. Rear case

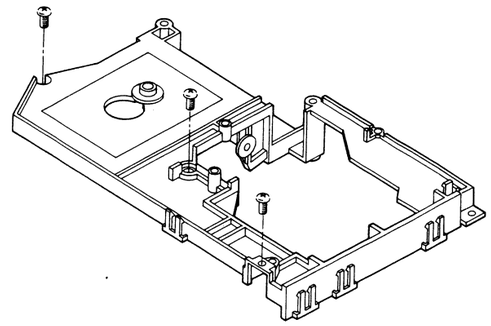


2. Main P.C.B.

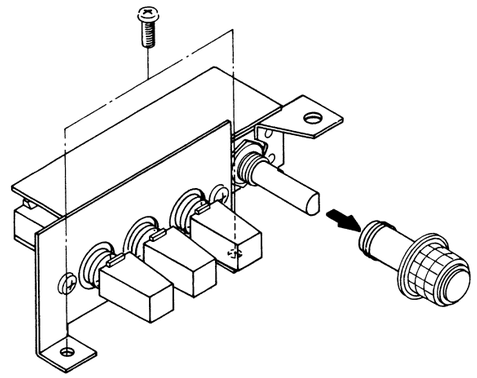




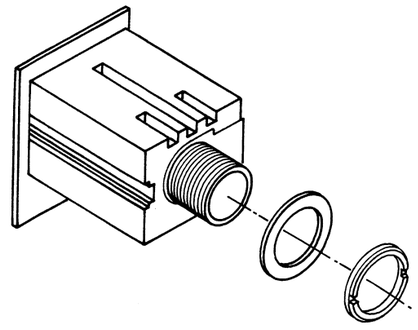
3. Radio chassis



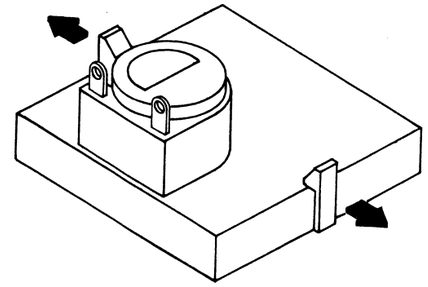
4. Volume P.C.B.



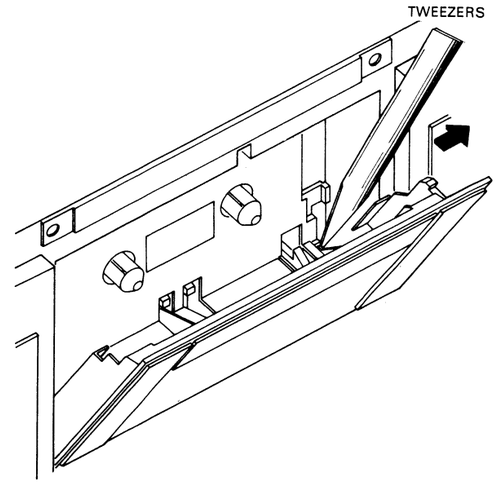
5. Headphone jack P.C.B.



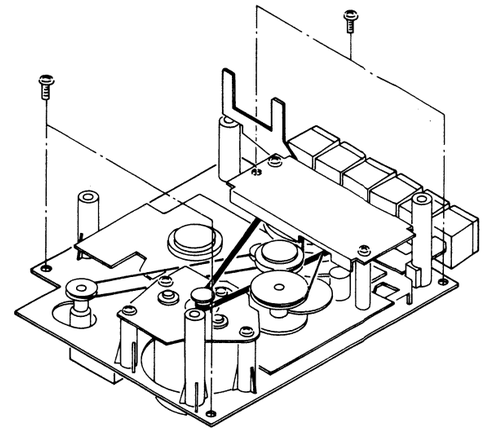
6. Level meter



7. Cassett lid




8. Deck chassis



## LUBRICATION

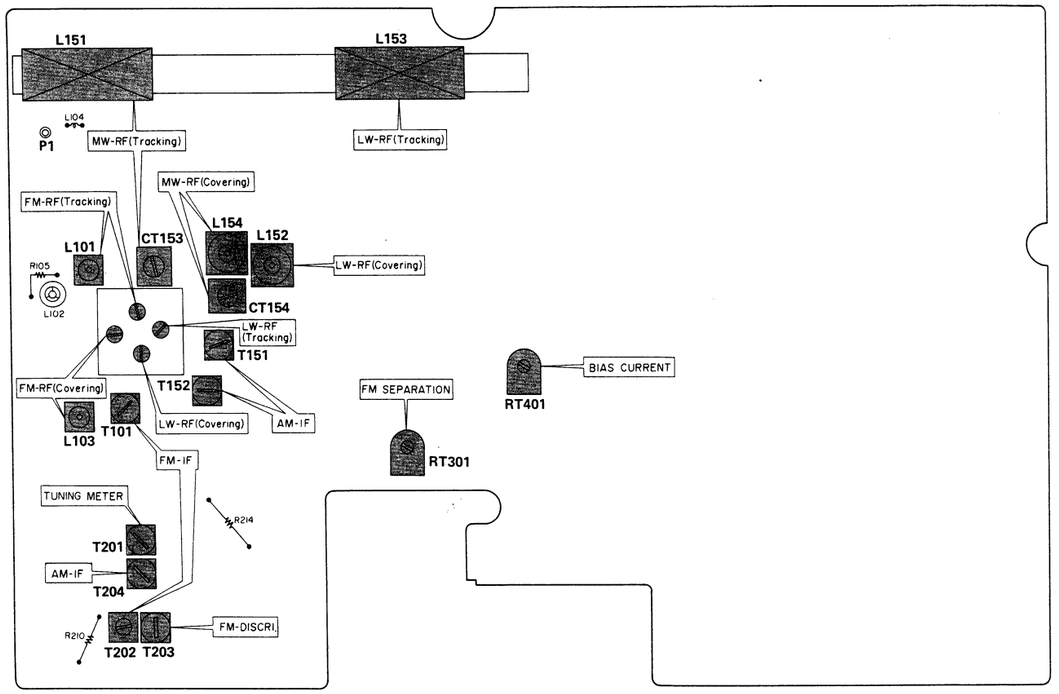
Lubricate one or two drops of machine oil rotating point or lubricate grease to sliding point.
Lubricate the respective parted below once every 1000 hours or once a year under normal conditions of use.
Avoid oiling then excessively, or rotation may become irregular because of oil splashes.

| | Lubrication point | Oil or Grease |
|---|---|---|
| Cassette deck | Motor shaft bearing | Oil |
| | Capstan shaft bearing | Oil |
| | Pinch roller shfat bearing | Oil |

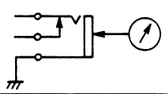
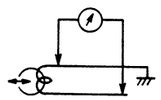
## INSPECTION

| Mode | Item | Pressure or Torque |
|---|---|---|
| Playback | Pressure of pressure roller | 300g $^{+50}_{-70}$ g |
| | Pressure of take-up roller | 50 — 120g |
| | Take-up torque | 40 — 70g.cm |
| | Supply reel back tension | 3g.cm or less |
| Rewind | Rewind torque | 55 — 85g.cm |
| | Take-up reel back tension | 4.5g.cm or less |
| Fast Forward | Fast Forward torque | 55 — 85g.cm |

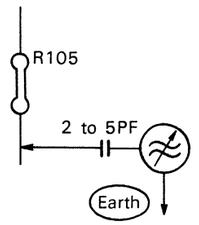
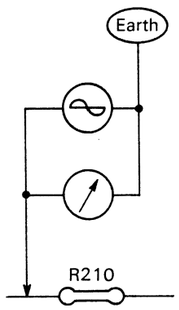
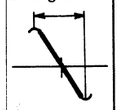
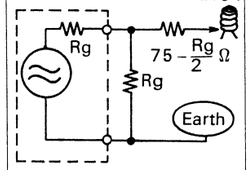
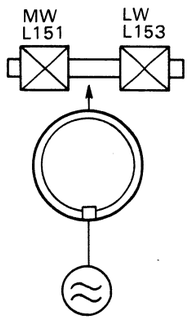
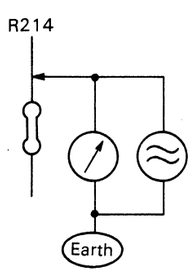
## ALIGNMENT INSTRUCTIONS (RADIO)




## ADJUSTMENT (TAPE RECORDER)

| Sequence | | Setting: Mode | Setting: Tape | Connection: VTVM | Adjust for: Adjust | Adjust for: Indication |
|---|---|---|---|---|---|---|
| | | ⇐ ⇒ | ○ ○ | Ⓥ | ⊘ | Ⓥ |
| 1 | **Head Azimuth** | Playback | f 10 kHz (MTT-116) | J5, J6 : EXT. SP  | | V max. |
| 2 | **Bias Current** | Record | ——— |  | RT401 | 8V |

## ADJUSTMENT (RADIO)

| Sequence | | Connection: Input (Sweep Generator / Signal Generator) | Connection: Output (Oscilloscope / V.T.V.M.) | Setting: Tuning | Setting: Signal | Adjust for: Adjust | Adjust for: Indication |
|---|---|---|---|---|---|---|---|
| | | Set core (T203: fully clockwise) | | | | | |
| 1 | FM-IF |  |  | f max. | 10.7 MHz | T101<br>T202 | |
| 2 | FM DISCRI | | | | | T203 |  |
| 3 | (Covering) FM-RF (Tracking) |  | | f min. | 87 MHz | L103 | V max. |
| | | | | f max. | 109 MHz | CT102 | |
| | | | | 90 MHz | 90 MHz | L101 | |
| | | | | 106 MHz | 106 MHz | CT101 | |
| 4 | MW/LW-IF |  |  | f max. | 465 kHz | T151<br>T152<br>T204 | |
| 5 | (Covering) MW-RF (Tracking) | | | f min. | 515 kHz | L154 | V max. |
| | | | | f max. | 1650 kHz | CT154 | |
| | | | | 600 kHz | 600 kHz | L151 | |
| | | | | 1400 kHz | 1400 kHz | CT153 | |
| 6 | (Covering) LW-RF (Tracking) | | | f min. | 145 kHz | L152 | |
| | | | | f max. | 360 kHz | CT152 | |
| | | | | 160 kHz | 160 kHz | L153 | |
| | | | | 330 kHz | 330 kHz | CT151 | |
| 7 | FM Separation | Apply output of stereo signal generator (98 MHz, 600 dB, pilot signal 10%, L+R signal 30%) to terminal P1.<br>Adjust RT301 so that separation is maximized. | | | | | |
| 8 | TUNING METER | In FM reception, adjust T201 for maximum deflection of the tuning meter. | | | | | |

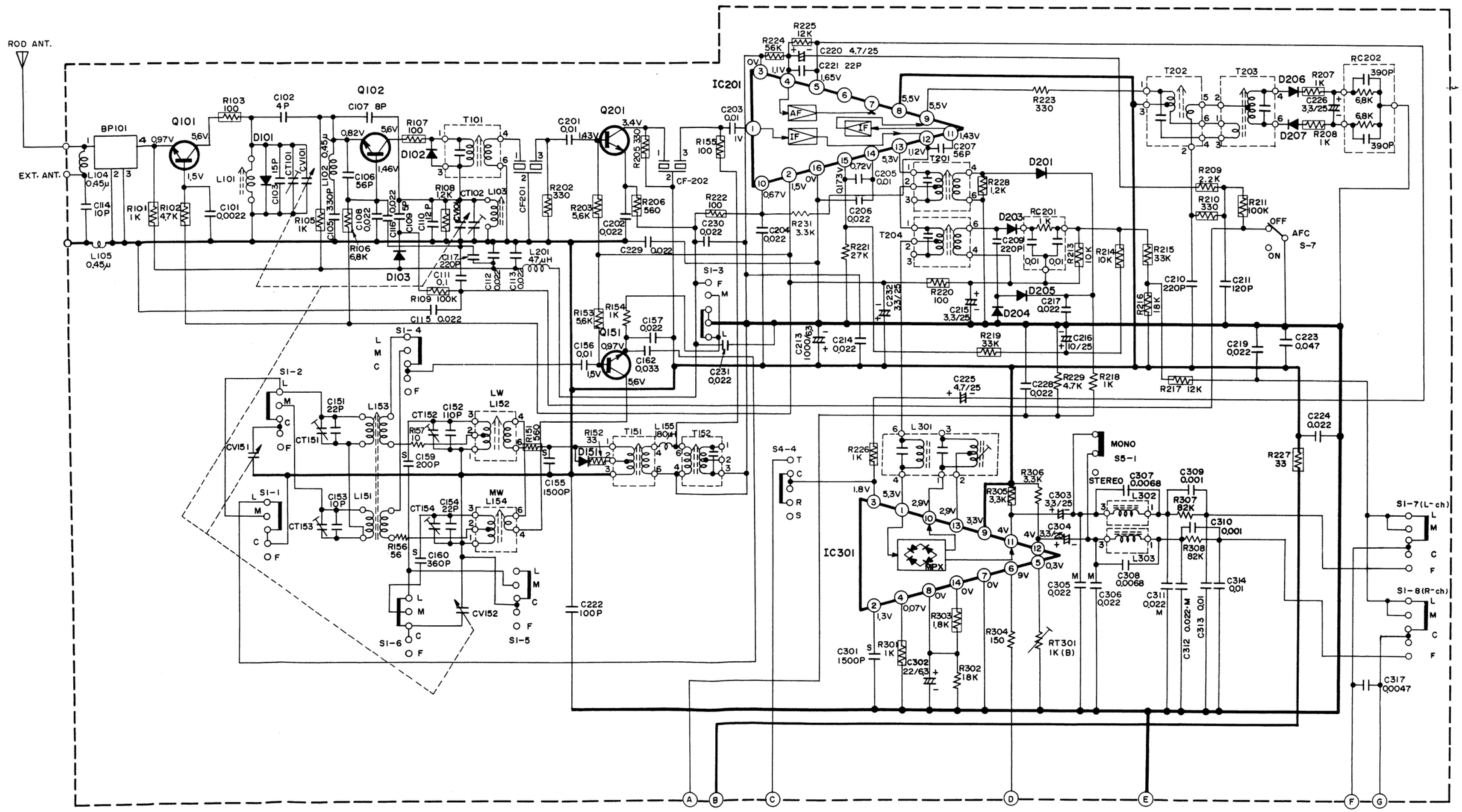


## REPLACEMENT PARTS LIST

| SYMBOL-NO | P-NO | DESCRIPTION |
|---|---|---|
| | | **CAPACITORS** |
| CT101 | 5052191 | PLASTIC FILM VARIABLE |
| CT102 | 5052191 | PLASTIC FILM VARIABLE |
| CT151 | 5052191 | PLASTIC FILM VARIABLE |
| CT152 | 5052191 | PLASTIC FILM VARIABLE |
| CT153 | 5058191 | TRIMMER 10PF |
| CT154 | 5058191 | TRIMMER 10PF |
| CV101 | 5052191 | PLASTIC FILM VARIABLE |
| CV102 | 5052191 | PLASTIC FILM VARIABLE |
| CV151 | 5052191 | PLASTIC FILM VARIABLE |
| CV152 | 5052191 | PLASTIC FILM VARIABLE |
| C107 | 0246428 | CERAMIC DISCAL |
| C109 | 0246425 | CERAMIC DISCAL 5P-D |
| C110 | 0246442 | CERAMIC 12PF 5% DC50WV |
| | | **RESISTORS** |
| RC201 | 0186001 | CR PACK 1KOHM 10% 0.01MF+80%-20% X 2 |
| RC202 | 0186357 | CR PACK |
| RC601 | 0186451 | CR PACK |
| RC602 | 0186451 | CR PACK |
| RT301 | 0151806 | SEMI VARIABLE 1K OHM B |
| RT401 | 0151807 | SEMI VARIABLE 500 OHM |
| RV401 | 5000293 | VARIABLE 100K OHM(B) |
| RV402 | 5000293 | VARIABLE 100K OHM(B) |
| RV403 | 5000294 | VARIABLE 100K OHM(C) |
| RV404 | 5000294 | VARIABLE 100K OHM(C) |
| RV405 | 5000281 | VARIBLE 50K OHM(B) |
| RV406 | 5000274 | VARIABLE 10K OHM(B) |
| RV407 | 5000274 | VARIABLE 10K OHM(B) |
| | | **SEMI-CONDUCTORS** |
| D101 | 5330131 | DIODE SILICON 1S2076 100MHZ 250MW 5NS |
| D102 | 5330572 | DIODE SILICON 1S2473HC 100MHZ 250MW 10NS |
| D103 | 5330661 | DIODE SILICON LS2790 200MHZ 80MW |
| D151 | 0575001 | DIODE GERMANIUM 1N34A 10MHZ 50MW 140NS |
| D201 | 5330731 | DIODE GERMANIUM IN60 80MHZ 50MW |
| D203 | 5330721 | DIODE GERMANIUM 1N34A 10MHZ 50MW |
| D204 | 5330731 | DIODE GERMANIUM IN60 80MHZ 50MW |
| D205 | 5330731 | DIODE GERMANIUM IN60 80MHZ 50MW |
| D206 | 5330732 | DIODE GERMANIUM 1N60P 80MHZ 50MW |
| D207 | 5330732 | DIODE GERMANIUM 1N60P 80MHZ 50MW |
| D401 | 0575001 | DIODE GERMANIUM 1N34A 10MHZ 50MW 140NS |
| D402 | 0575001 | DIODE GERMANIUM 1N34A 10MHZ 50MW 140NS |
| D403 | 5330572 | DIODE SILICON 1S2473HC 100MHZ 250MW 10NS |
| D404 | 5330572 | DIODE SILICON 1S2473HC 100MHZ 250MW 10NS |
| D405 | 0575001 | DIODE GERMANIUM 1N34A 10MHZ 50MW 140NS |
| D406 | 0575001 | DIODE GERMANIUM 1N34A 10MHZ 50MW 140NS |
| D601 | 5330373 | DIODE SV-018 |
| D602 | 5330374 | DIODE SV-028 |
| IC201 | 5351061 | IC AN253BB |
| IC301 | 5351141 | IC LA3301 |
| IC401 | 5356681 | IC TA1020 |
| IC402 | 5356521 | IC TA1021 |
| IC501 | 5350582 | IC LA4102R |
| IC502 | 5350582 | IC LA4102R |
| Q101 | 5321271 | TRANSISTOR SILICON 2SC1674L 600MHZ 250MW |
| Q102 | 5321271 | TRANSISTOR SILICON 2SC1674L 600MHZ 250MW |
| Q151 | 5321281 | TRANSISTOR SILICON 2SC1675-L 230MHZ 200MW |
| Q201 | 5321281 | TRANSISTOR SILICON 2SC1675-L 230MHZ 200MW |
| Q401 | 5321291 | TRANSISTOR 2SC1740R |
| Q402 | 5321291 | TRANSISTOR 2SC1740R |
| | | **TRANSFORMERS** |
| T001 | 5211921 | POWER 4VA, 4DDG(E) |
| T001 | 5212123 | POWER (BS) |
| T101 | 5140017 | FM IF |
| T151 | 5130034 | AM IF |
| T152 | 5130031 | AM IF 20K OHM : 3K OHM |
| T201 | 5140019 | FM IF |
| T202 | 5148012 | DISCRIMINATOR-1ST |
| T203 | 5148034 | FM IF |
| T204 | 5130033 | AM IF |
| | | **COILS** |
| L101 | 5126006 | FM RF 0.5 MICRO H |
| L102 | 5150791 | CHOKE |
| L103 | 5126362 | FM-OSC |
| L104 | 5150791 | CHOKE |
| L151 | 5113192 | FERRITE ANTENNA |
| L152 | 5120174 | MW OSCILLATOR |
| L153 | 5113192 | FERRITE ANTENNA |
| L153 | 5152091 | CHOKE 180MICRO H |
| L154 | 5120195 | MW OSCILLATOR |
| L201 | 5152083 | CHOKE |
| L301 | 5161561 | MP FILTER |
| L302 | 5120189 | 38KHZ TUNER |
| L303 | 5120189 | 38KHZ TUNER |
| L401 | 5120304 | TRAP |
| L402 | 5120304 | TRAP |
| | | **MISCELLANEOUS** |
| ANT | 5752341 | ROD ANTENNA |
| BP101 | 5161551 | FM BAND PASS FILTER |
| CF201 | 5160211 | CERAMIC FILTER CF107A |

## SCHEMATIC DIAGRAM (RADIO)

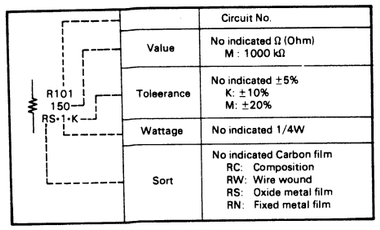
| Q101 | D101 | Q102 | D103 | D102 | Q201 | D151 | Q151 | IC201 | D203 | D201,D204,D205 | D206.D207 | IC301 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2SC1674 | 1S2076 | 2SC1674 | 1S2790 | 1S2473HC | 2SC1675 | IN34A | 2SC1675 | AN253 | IN34A | IN60 | IN60P | LA3301 |
| FM RF AMP. | FM LIMITER | FM CONV. | FM AFC | FM LIMITER | FM IF AMP. | AUX. AGC | AM CONV. | FM/AM IF AMP. FM PRE AMP. | AM DET. | FM/AM TUN. METER | FM DISC. | FM MPX. |



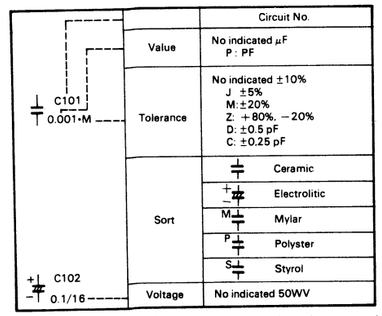
# SCHEMATIC DIAGRAM (TAPE RECORDER)

**Note:**

1. Voltage measured at base of chassis with minimum volume control and no signal.
2. Nomenclature of Resistors and Capacitors.

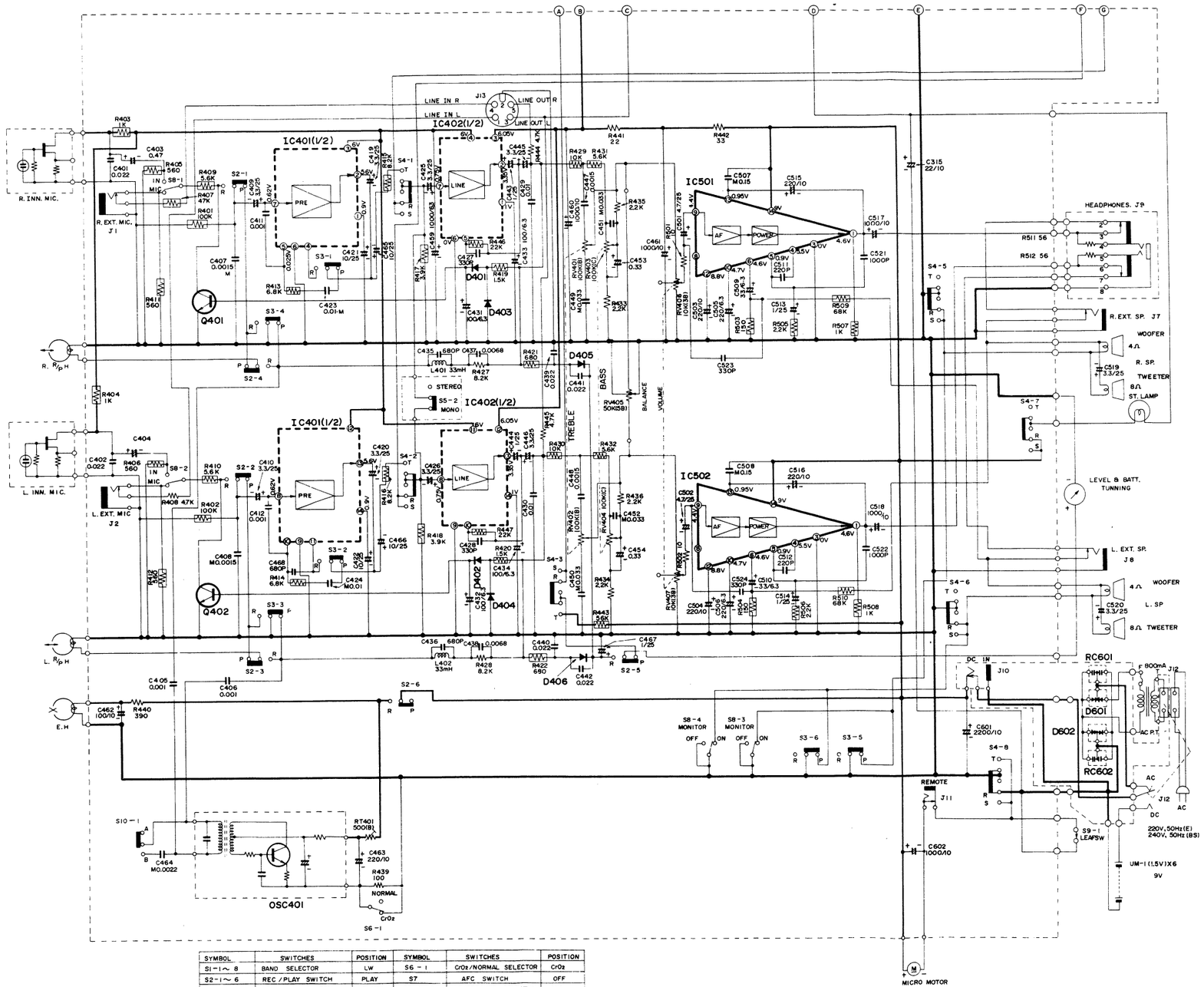



| | Circuit No. |
|---|---|
| Value | No indicated Ω (Ohm)<br>M : 1000 kΩ |
| Tolerance | No indicated ±5%<br>K: ±10%<br>M: ±20% |
| Wattage | No indicated 1/4W |
| Sort | No indicated Carbon film<br>RC: Composition<br>RW: Wire wound<br>RS: Oxide metal film<br>RN: Fixed metal film |




| | Circuit No. | |
|---|---|---|
| Value | No indicated μF<br>P : PF | |
| Tolerance | No indicated ±10%<br>J ±5%<br>M: ±20%<br>Z: +80%, −20%<br>D: ±0.5 pF<br>C: ±0.25 pF | |
| Sort | | Ceramic |
| | | Electrolitic |
| | M | Mylar |
| | P | Polyster |
| | S | Styrol |
| Voltage | No indicated 50WV | |

3. Be sure to make your orders of resistors and capacitors with value, voltage, tolerance and sort.
4. When replacing capacitors marked with *, use specified ones stated on parts list since required temperature characteristics.

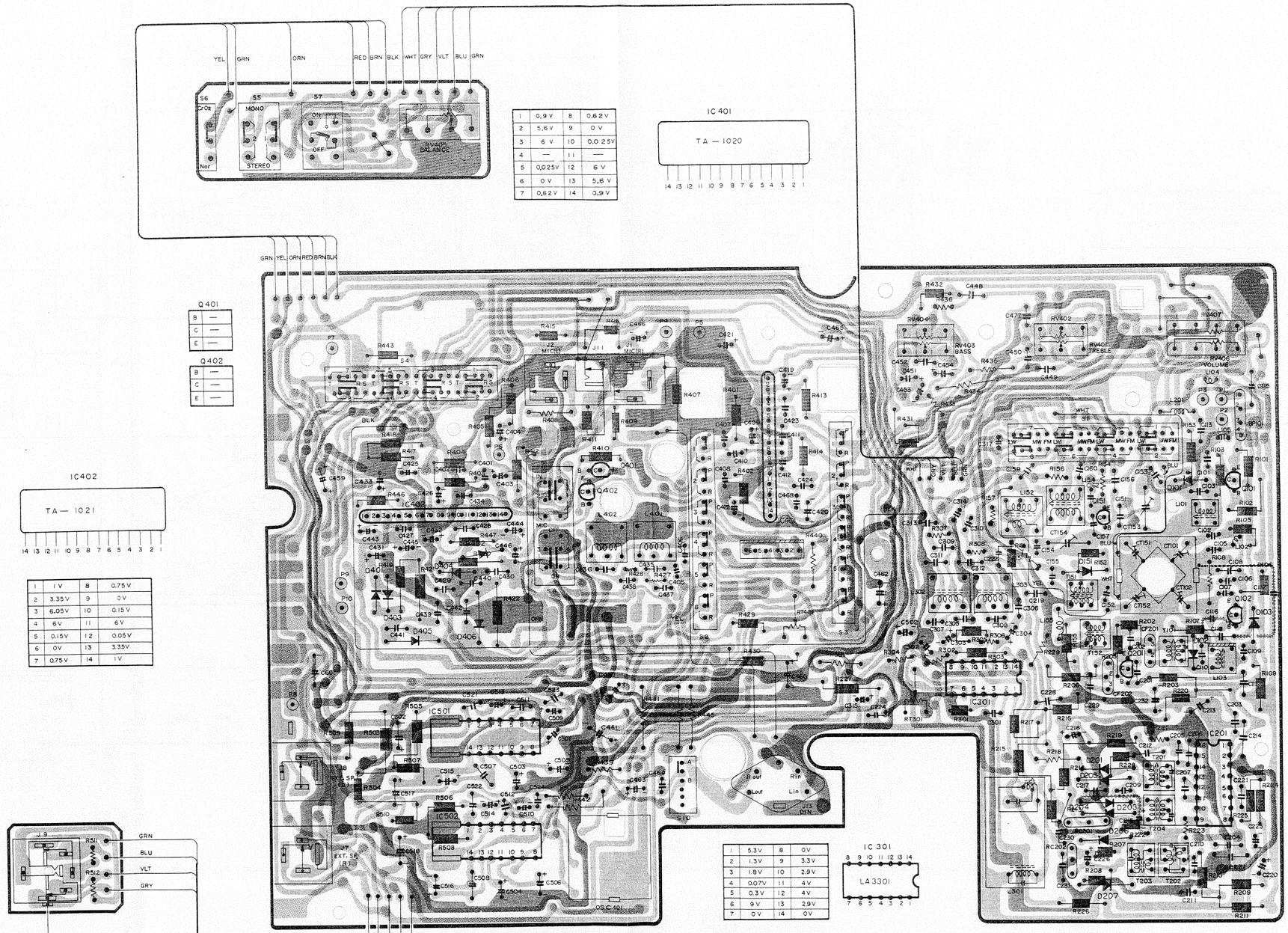



| SYMBOL | SWITCHES | POSITION | SYMBOL | SWITCHES | POSITION |
|---|---|---|---|---|---|
| S1-1~8 | BAND SELECTOR | LW | S6-1 | CrO2/NORMAL SELECTOR | CrO2 |
| S2-1~6 | REC/PLAY SWITCH | PLAY | S7 | AFC SWITCH | OFF |
| S3-1~6 | REC/PLAY SWITCH | PLAY | S8-1~5 | MIC/SPEAKER SELECTOR | MIC |
| S4-1~8 | TAPE/RADIO/SLEEP SELECTOR | RADIO | S9-1 | LEAF SW | ON |
| S5-1~2 | STEREO/MONO SELECTOR | MONO | S10-1 | RIF SW | OFF |

Q401 2SC1740R ALC
IC401(1/2) TA1020 PRE AMP.
IC402(1/2) TA1021 LINE AMP.
Q402 2SC1740R ALC
D401 IN34A ALC
D403 IS2473 ALC
D405 IN34A RECT.
D402 IN34A ALC
D404 IS2473 ALC
D406 IN34A RECT.
IC501,IC502 LA4102 POWER AMP.
D601 SV-01B RECT.
D602 SV-02B RECT.

# CIRCUIT BOARD DIAGRAM

: SIDE OF THE COMPONENT EARTH : SIDE OF THE COMPONENT SIGNAL, +B, ETC. : EARTH : SIGNAL, +B, ETC.




| | | | |
|---|---|---|---|
| 1 | 0.9 V | 8 | 0.62 V |
| 2 | 5.6 V | 9 | 0 V |
| 3 | 6 V | 10 | 0.0 25V |
| 4 | — | 11 | — |
| 5 | 0.025V | 12 | 6 V |
| 6 | 0 V | 13 | 5.6 V |
| 7 | 0.62 V | 14 | 0.9 V |

| | | | |
|---|---|---|---|
| 1 | 1 V | 8 | 0.75 V |
| 2 | 3.35 V | 9 | 0 V |
| 3 | 6.05 V | 10 | 0.15 V |
| 4 | 6 V | 11 | 6 V |
| 5 | 0.15 V | 12 | 0.05 V |
| 6 | 0 V | 13 | 3.35 V |
| 7 | 0.75 V | 14 | 1 V |

| | | | |
|---|---|---|---|
| 1 | 5.3 V | 8 | 0 V |
| 2 | 1.3 V | 9 | 3.3 V |
| 3 | 1.8 V | 10 | 2.9 V |
| 4 | 0.07 V | 11 | 4 V |
| 5 | 0.3 V | 12 | 4 V |
| 6 | 9 V | 13 | 2.9 V |
| 7 | 0 V | 14 | 0 V |

| | | | |
|---|---|---|---|
| 1 | 4.6 V | 8 | — |
| 2 | — | 9 | 4.4 V |
| 3 | 0 V | 10 | 4.7 V |
| 4 | 5.5 V | 11 | — |
| 5 | 0.9 V | 12 | 8.8 V |
| 6 | 4.6 V | 13 | 0.95 V |
| 7 | — | 14 | 9 V |

| | | | |
|---|---|---|---|
| 1 | 1 V | 9 | 5.5 V |
| 2 | 1.5 V | 10 | 0.67 V |
| 3 | 0 V | 11 | 1.43 V |
| 4 | 1.1 V | 12 | 1.12 V |
| 5 | 1.65 V | 13 | 5.3 V |
| 6 | — | 14 | 0.72 V |
| 7 | — | 15 | 0.173 V |
| 8 | 5.5 V | 16 | 0 V |

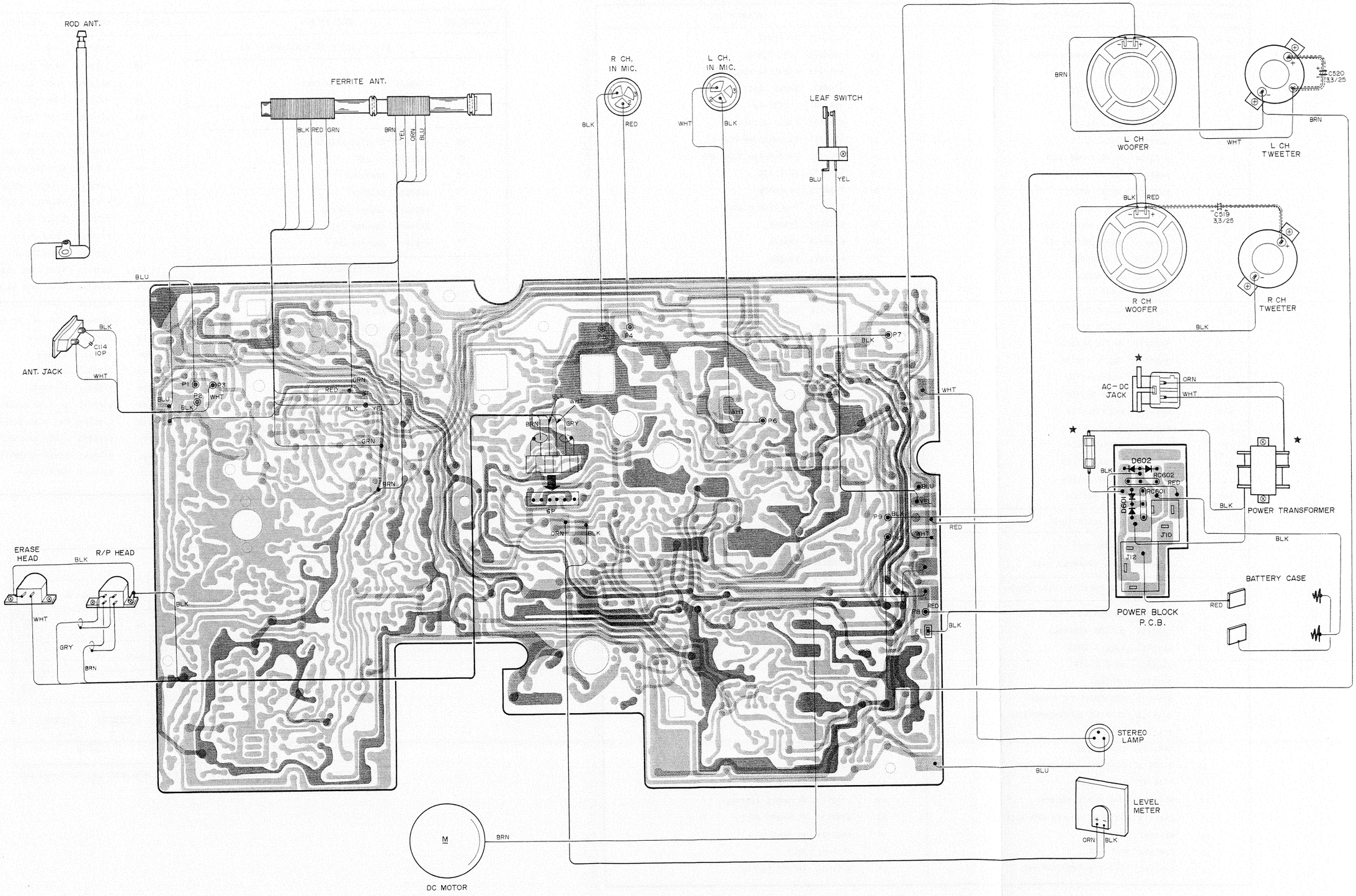
| | |
|---|---|
| B | 1.5 V |
| C | 5.6 V |
| E | 0.97 V |

| | |
|---|---|
| B | 1.5 V |
| C | 5.6 V |
| E | 0.97 V |

| | |
|---|---|
| B | 1.46 V |
| C | 5.6 V |
| E | 0.82 V |

| | |
|---|---|
| B | 1.43 V |
| C | 3.4 V |
| E | — |

# WIRING DIAGRAM



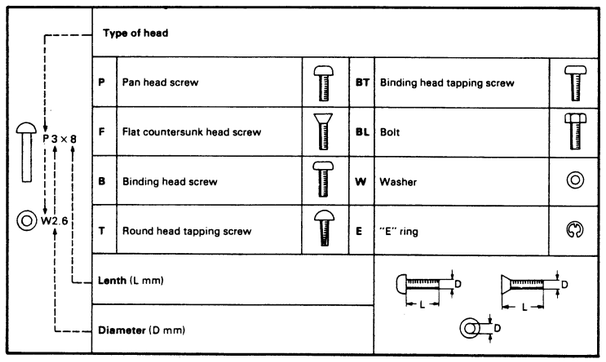
## REPLACEMENT PARTS LIST

| SYMBOL-NO | P-NO | DESCRIPTION |
|---|---|---|
| CF202 | 5160211 | CERAMIC FILTER CF107A |
| FM ANT•J | 5671661 | FM ANTENNA TERMINAL |
| F001 | 5720175 | FUSE 0.8A |
| J 1 | 5679431 | JACK PLATE |
| J 2 | 5679431 | JACK PLATE |
| J 7 | 5679432 | JACK PLATE |
| J 8 | 5679432 | JACK PLATE |
| J 9 | 5670454 | HEAD PHONE JACK |
| J10 | 5653241 | AC-DC SOCKET |
| J12 | 5653241 | AC-DC SOCKET |
| J13 | 5653211 | DIN JACK |
| LM | 5554411 | LEVEL METER (BS) |
| LM | 5554413 | LEVEL METER (E) |
| MIC | 5421014 | MICROPHONE |
| OSC401 | 5260642 | OSC BLOCK |
| PL | 5760822 | LAMP |
| S 1 | 5620382 | SLIDE SWITCH |
| S 2 | 5623271 | SLIDE SWITCH |
| S 3 | 5623271 | SLIDE SWITCH |
| S 4 | 5620382 | SLIDE SWITCH |
| S 5 | 5634114 | PUSH SWITCH |
| S 6 | 5634114 | PUSH SWITCH |
| S 7 | 5634114 | PUSH SWITCH |
| S 8 | 5620701 | SLIDE SWITCH |
| SP | 5401511 | SPEAKER-5CM |
| SP | 5406221 | SPEAKER-12CM |
| S10 | 5621181 | SLIDE SWITCH |
| S11 | 5603231 | LEAF SWITCH |
| | | FOR ACCESSARYS |
| | 5743898 | POWER CORD (E) |
| | 5746341 | CORD ASSEMBLY (BS) |
| | | FOR CASSETTE DECK ASSEMBLY (A) |
| 1 | 6050202 | BUTTON ASSEMBLY |
| 2 | 6050201 | BUTTON ASSEMBLY |
| 3 | 0948492 | BALL - 2MMD |
| 4 | 7105833 | HEAD PLATE |
| 5 | 6321734 | SPRING |
| 6 | 5444551 | RECORD PLAYBACK HEAD |
| 7 | 7780912 | TAPPING SCREW-2MMDX8MM |
| 8 | 7781004 | SCREW |
| 9 | 5445101 | ERASE HEAD |
| 10 | 7780912 | TAPPING SCREW-2MMDX8MM |
| 11 | 0948492 | BALL - 2MMD |
| 12 | 6329631 | HEAD PLATE HOLDER |
| 13 | 6383142 | PRESSURE ROLLER ARM ASSEMBLY |
| 14 | 6307741 | SPRING |
| 15 | 7286182 | PR LEVER |
| 16 | 6741102 | RECORD PREVENTION ARM |
| 17 | 7286252 | PR PLATE |
| 18 | 7286143 | LOCK PLATE |
| 19 | 6530471 | CASSETTE HOLDER |
| 20 | 6740971 | BRAKE FUNCTION ARM |
| 21 | 6740981 | EJECT ARM |
| 22 | 6741183 | EJECT SLIDER |
| 23 | 6741111 | AS FUNCTION PLATE |
| 24 | 6741711 | SWITCH FUNCTION ARM |
| 25 | 7287692 | SW PLATE |
| 26 | 7288513 | RC PLATE |
| 27 | 7288494 | FUNCTION PLATE |
| 28 | 6308102 | SPRING |
| 29 | 6307733 | SPRING |
| 30 | 6307711 | SPRING |
| 31 | 6300373 | SPRING |
| 32 | 7286241 | PAUSE LOCK PIECE |
| 33 | 7286211 | RECORD SLIDER |
| 34 | 7286222 | REWIND SLIDER |
| 35 | 7286042 | PAUSE SLIDER ASSEMBLY |
| 36 | 7286061 | STOP SLIDER |
| 37 | 7286171 | PLAY SLIDER |
| 38 | 7286203 | FF SLIDER |
| 39 | 7286193 | RECORDING LOCK LEVER |
| 40 | 5572612 | MOTOR ASSEMBLY |
| 41 | 6576083 | RUBBER PLATE |
| 42 | 7575001 | COLLAR |
| 43 | 0711309 | PAN HEAD SCREW - 2.6MMD X 9MM |
| 44 | 8811113 | WASHER - 2.6MMD 2 REQ'D |
| 45 | 7287813 | RC LEVER |
| 46 | 6329192 | FF FUNCTION LEVER |
| 47 | 6304161 | SPRING |
| 48 | 7292041 | TURNTABLE HOLDER ASSEMBLY |
| 49 | 6300373 | SPRING |
| 50 | 6324814 | SPRING |
| 51 | 7286031 | FR LEVER |
| 52 | 6412302 | TAKE UP ARM ASSEMBLY |
| 53 | 6301101 | SPRING |
| 54 | 6301232 | SPRING |
| 55 | 6301022 | SPRING |
| 56 | 6740996 | FR ARM ASSEMBLY |
| 57 | 6300981 | SPRING |
| 58 | 6301361 | SPRING |
| 59 | 6323064 | SPRING |
| 60 | 6301011 | LOCK LEVER SPRING |
| 61 | 6300991 | SPRING |
| 62 | 6372551 | FLYWHEEL ASSEMBLY |
| 63 | 6357131 | FLYWHEEL BELT |
| 64 | 6421224 | AS PULLEY |
| 65 | 6354601 | BELT |
| 66 | 6743681 | THRUST SUPPORT |



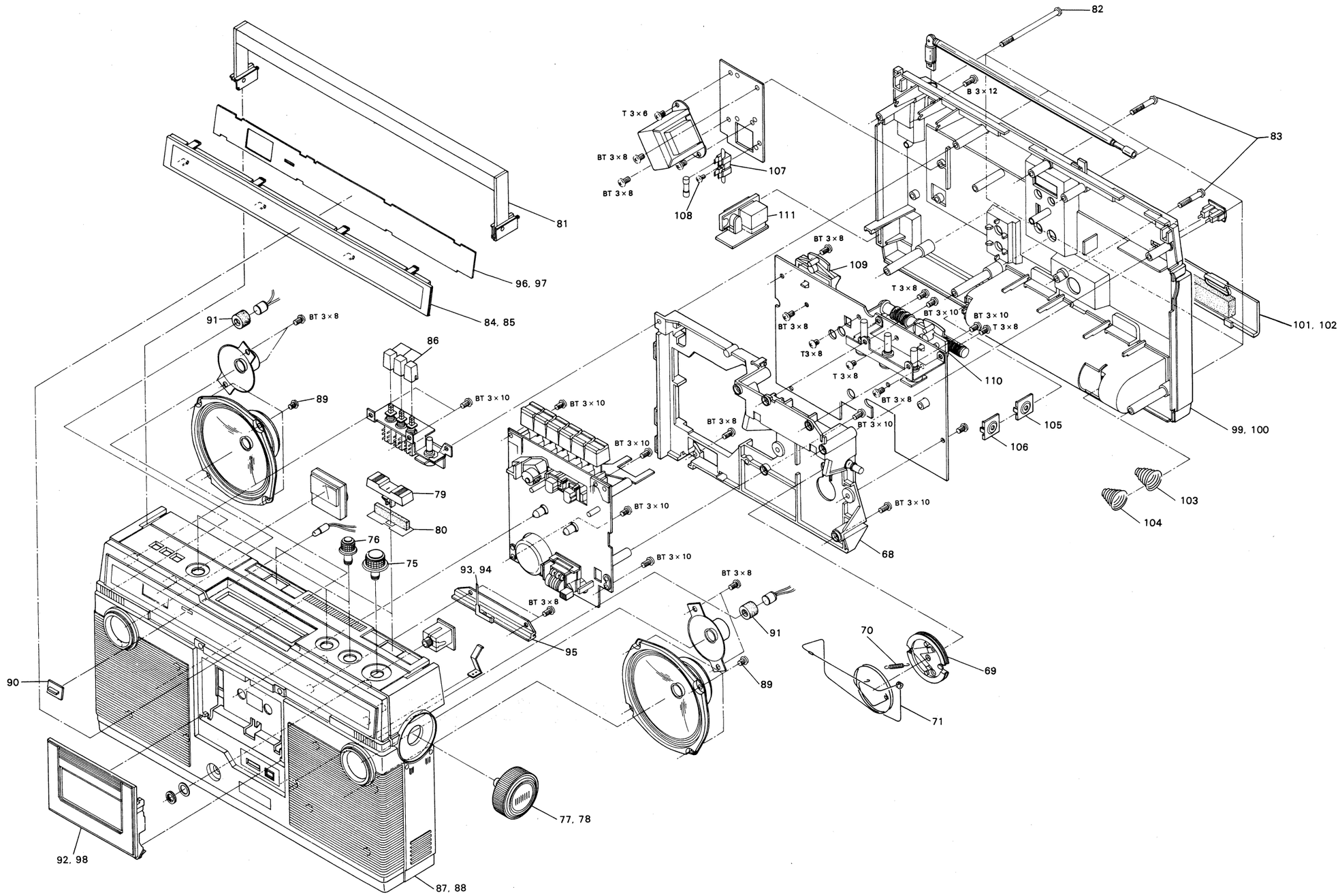
## REPLACEMENT PARTS LIST

| SYMBOL-NO | P-NO | DESCRIPTION |
|---|---|---|
| | | FOR CASSETTE DECK ASSEMBLY (A) |
| 67 | 7786621 | POLYSLIDER WASHER |
| | | FOR CASSETTE DECK ASSEMBLY (B) |
| 68 | 6743972 | CHASSIS ASSEMBLY |
| 69 | 6421073 | PULLEY |
| 70 | 6316231 | SPRING M |
| 71 | 7539831 | STOPPER |
| 72 | 6530272 | RECORD SPRING |
| 73 | 5559071 | COUNTER (MZ) |
| 74 | 6354471 | COUNTER BELT |
| | | MISCELLANEOUS |
| 75 | 6281921 | KNOB ASSEMBLY |
| 76 | 6281901 | KNOB ASSEMBLY |
| 77 | 6281566 | TUNING KNOB ASSEMBLY (E) |
| 78 | 6281564 | TUNING KNOB ASSEMBLY (BS) |
| 79 | 6296302 | SLIDE KNOB |
| 80 | 7767814 | SPACER (S) |
| 81 | 6333435 | HANDLE ASSEMBLY |
| 82 | 7781301 | TAPPING SCREW-3MMDX80MM |
| 83 | 7777948 | BIND HEAD FORMING TIGHTENING SCREW |
| 84 | 6201394 | CLEAR PANEL ASSEMBLY (BS) |
| 85 | 6201393 | CLEAR PANEL ASSEMBLY (E) |
| 86 | 6259971 | KNOB |
| 87 | 6138662 | FRONT CASE ASSEMBLY (BS) |
| 88 | 6138664 | FRONT CASE ASSEMBLY (E) |
| 89 | 7781134 | BINDING SCREW |
| 90 | 6712962 | LAMP WINDOW |
| 91 | 6570061 | MIC COVER |
| 92 | 6090923 | CASSETTE LID ASSEMBLY (BS) |
| 93 | 6399574 | POINTER ASSEMBLY (BS) |
| 94 | 6399575 | POINTER ASSEMBLY (E) |
| 95 | 6743991 | POINTER GUIDE |
| 96 | 6478946 | SCALE PLATE (BS) |
| 97 | 6478947 | SCALE PLATE (E) |
| 98 | 6090929 | CASSETTE LID ASSEMBLY (E) |
| 99 | 6138712 | REAR CASE ASSEMBLY (E) |
| 100 | 6138713 | REAR CASE ASSEMBLY (BS) |
| 101 | 6173212 | BATTERY LID ASSEMBLY (E) |
| 102 | 6173213 | BATTERY LID ASSEMBLY (BS) |
| 103 | 0681129 | SPRING A |
| 104 | 6324112 | SPRING |
| 105 | 7450342 | TERMINAL |
| 106 | 7450341 | TERMINAL |
| 107 | 5720011 | 1P FUSE HOLDER |
| 108 | 0711306 | PAN HEAD SCREW-2.6MMDX6MM |
| 109 | 6741393 | LEVER ASSEMBLY |
| 110 | 6744243 | LEVER ASSEMBLY |
| 111 | 5659121 | BACK COVER |




When ordering hardware excluding stated on these lists, be sure to make your orders with type and size.

## CABINET EXPLODED VIEW



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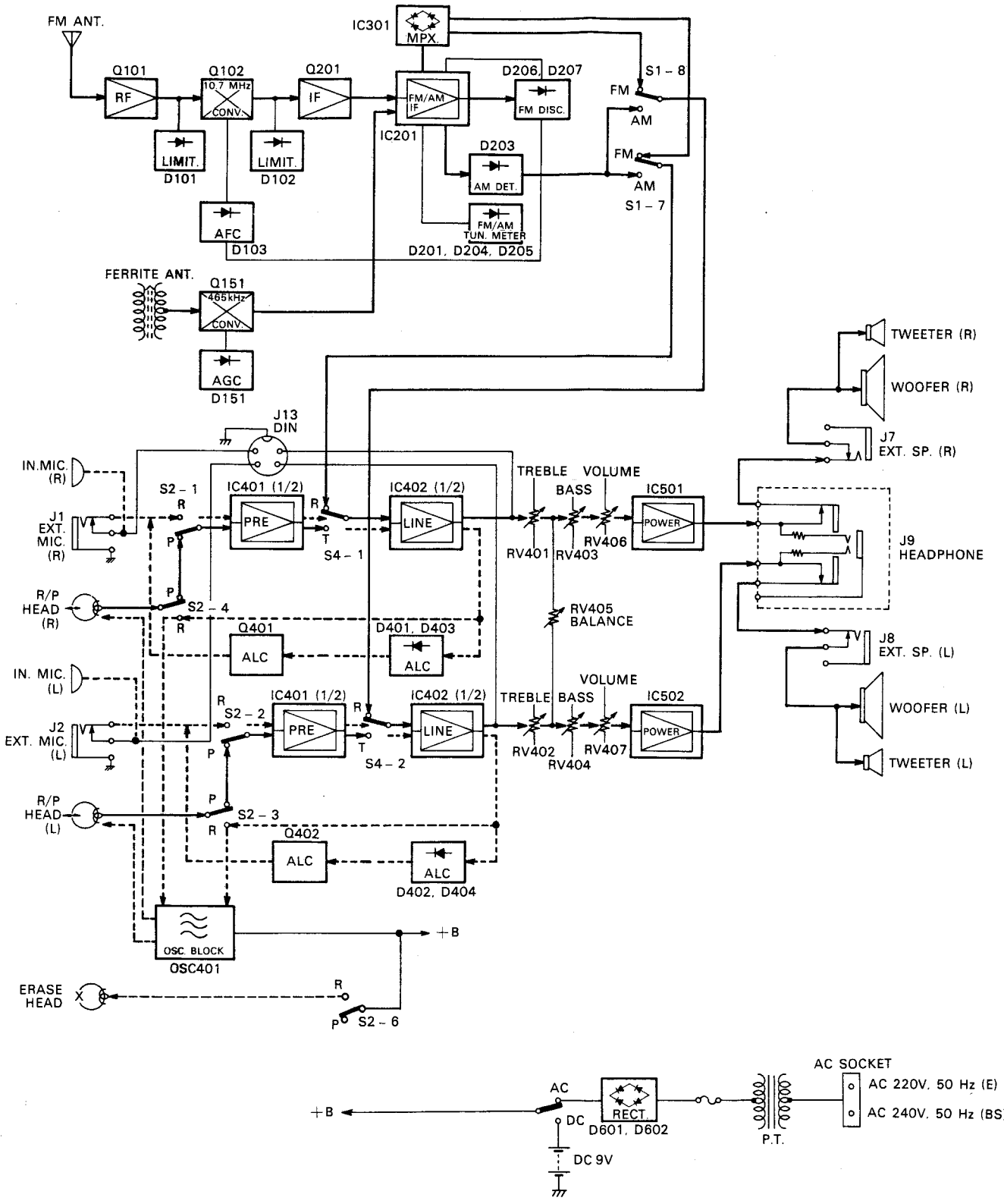
# BLOCK DIAGRAM



## CASSETTE MECHANISM EXPLODED VIEW